Amendments to the Drawings:

The attached sheet of drawings includes changes to Figures 1-2. This sheet, which includes Fig. 1-2, replaces the original sheet including Fig. 1-2.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Claims 1-11 are now pending in the application. Claims 14 have been amended. Claims 10-11 have been added. Support for the foregoing amendments can be found in the original specification, claims, and drawings, such as page 8, first paragraph of the specification as originally filed. No new matter has been added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the above amendments and remarks that follow.

As an initial matter, the Office action summary sheet indicates that there is a claim of foreign priority, and page 4 of the Office action indicates that "a certified copy has been filed in parent China Application No. 200310103400.7, filed on 10/30/2003." However, it is not clear whether the USPTO has received "certified copies" of the priority document from the International Bureau. If such certified copies have been received, Applicant respectfully requests the Examiner to check priority box 3 on the Office action summary sheet, in addition to box 12(a).

DRAWINGS

The drawings stand objected to for certain informalities. Applicant has attached revised drawings for the Examiner's approval. Specifically, the replacement sheets for Fig. 1 and Fig. 2 have been labeled as "Prior Art." Withdrawal of the objection to the drawings is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

A.   Claims 1-3 and 5-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim et al. (U.S. Pat. No. 7,386,876) in view of Sherer et al. (U.S. Pat. No. 6,115,376).

B.   Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim
        in view of Sherer and further in view of Yao et al. (U.S. Pat. No. 7,263,559).

These rejections are respectfully traversed.

Response to section 8 of the Office Action

In conducting Ethernet communication, an Ethernet communication device determines a forwarding port for a data packet by the MAC address information of the forwarding port, and this is based on a MAC address learning mechanism. (See, specification, page 2, par. 2). For example, when receiving a data packet transmitted by PC 1 via Port 1 carrying MAC 1 as the source MAC address, a switch establishes a map between MAC 1 and Port 1. When receiving a data packet needed to be transmitted to MAC 1, the switch transmits the data packet to PC 1 via Port 1 according to the map. (See, Id.)

Since there is no authentication mechanism in the above-mentioned MAC address learning process, some malicious users may attack an Ethernet user by MAC address cheating or MAC address bombing. (See, Id.). For example, if the user of PC 2 is a malicious user and plans to attack PC 1, he may transmit a data packet carrying MAC 1 as the source MAC address from PC 2. According to the above traditional MAC learning process, this will cause the switch to establish a map between MAC 1 and Port 2. After the learning process, the map between MAC 1 and Port 1 in the switch's MAC table will be changed to indicate a map between MAC 1 and Port 2. Therefore, all the data packets to be sent to PC 1 will be transmitted to Port 2 and then to PC 2, resulting in PC 1 failing to receive data packets normally.

Amended claim 1 helps solve the above problem by "prohibiting the fixed map between the port and the hardware address from being modified as long as the connection between the port and the terminal device is not cut off." Thus, after the map is established, it is not modified until the connection between the port and the terminal device is cut off. It can be seen that, according to the solution of amended claim 1, when a malicious user performs MAC address

cheating or MAC address bombing, he will not be able to change the established map between MAC addresses and ports, and users will not be affected and be able to receive data packets normally. Further, since the Ethernet communication device receiving the attacking data packets will not perform the map updating process, the performance of the device will not be affected.

Kim provides a MAC address-based communication restricting method, where "client nodes communicable with a server node are registered preliminarily in an Ethernet switch so that unauthorized client nodes are denied access in a lower layer." (Column 7, lines 29-31 of Kim).

Applicant respectfully submits that **Kim fails to teach or suggest** "prohibiting the fixed map between the port and the hardware address from being modified as long as the connection between the port and the terminal device is not cut off," as required by amended claim 1.

Sherer provides a method for improving network security in a network, where a star configured interconnection device stores **authentication data "that maps MAC addresses of end stations in the network to particular ports** on the star configured interconnection device." (Col. 2, lines 58-62). (Emphasis added). Sherer teaches that if a packet received from a particular port "does not carry a source MAC address which the authentication maps to the port," and "if it is determined that the packet carrying the MAC address originates from an authorized sender . . . then **the authentication data is updated.**" (Column 2 line 67 - column 3 lines 4, and column 3 lines 9 -15 of Sherer). (Emphasis added).

It can be seen that according to Sherer, the mapping between MAC addresses and ports can be updated under some circumstances while there is a connection between a port and an end station. Thus, Applicant respectfully submits that **Sherer also fails to disclose or suggest** "prohibiting the fixed map between the port and the hardware address from being modified as long as the connection between the port and the terminal device is not cut off," as is required by amended claim 1.

In view of the foregoing, Applicant respectfully submits that Kim and Sherer, alone or combination with each other, fail to teach or suggest all of the limitations of amended claim 1. Amended claim 1 therefore defines over the art cited by the Examiner and is now in condition for allowance.

Claims 2-3 and 5-9 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain.

Response to section 16 of the Office Action

With respect to the rejection of claim 4, the Examiner acknowledges that Kim and Sherer do not teach that "after discarding the data packet, recording the judgment result in a log and informing a network administrator." However, the Examiner relies on Yao to make up for this deficiency.

Yao provides a method for preventing IP address cheating in dynamic address allocation by detecting "whether there is a matching item in the legal subscriber address table" corresponding to "the source MAC address and the source IP address involved in an ARP packet sent from a subscriber terminal." (Abstract).

Without addressing the Office action's assertions that are not conceded, Applicant respectfully submits that claim 4 is in condition for allowance because it depends on an allowable base claim, and for the additional limitations that it contains.

Yao also fails to teach or suggest "prohibiting the fixed map between the port and the hardware address from being modified as long as the connection between the port and the terminal device is not cut off," as is now required by amended claim 1, since Yao does not mention anything about the mapping between the MAC addresses and ports.
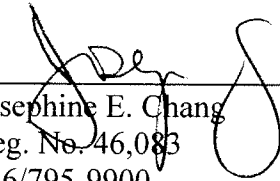
NEW CLAIMS

Claim 10 is new and includes limitations similar to the limitations of claim 1 which make claim 1 allowable. Accordingly, claim 10 is in condition for allowance.

Claim 11 is also in condition for allowance because it depends on an allowable base claim and for the additional limitations that it contains.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By _____
Josephine E. Chang
Reg. No. 46,083
626/795-9900

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